



UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/342,789 06/29/99 CORSIS

D 3384.105

MM21/1130

TRASK BRITT & ROSSA
P O BOX 2550
SALT LAKE CITY UT 84110

EXAMINER
GRAYBILL, D

ART UNIT	PAPER NUMBER
2814	

DATE MAILED: 11/30/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/342,789

Applicant(s)

CORSIS, DAVID J.

Examiner

David E Graybill

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 September 2000.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-39 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. & 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 18) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other: _____.

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The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 1, 7, 12-14, 20, 25-27, 33 and 38-39 are rejected under 35 U.S.C. 102(b) as being anticipated by Yoshigai (5606199).

At column 3, line 61 to column 6, line 23, Yoshigai teaches a device comprising a semiconductor die 4 having an active surface having a plurality of bond pads 4a thereon and an opposing second surface; a plurality of projections connected to the plurality of bond pads for direct connection to a host circuit board 1 having circuit connections 3a; the plurality of projections including a plurality of solder bumps ("eutectic," and "bump electrode"), the plurality of bond pads bonded to the connections; and a metal paddle 7 of a lead frame 5 having side rails 8 connected to the paddle, the second surface of the die secured to the paddle; an electrically conductive adhesive layer ("conductive paste") securing the surface of the die to the

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paddle; and sealant packaging material 11 enclosing a portion of the die and covering a portion of the substrate.

Although Yoshigai does not appear to explicitly teach a lead frame of a plurality of lead frames, this is a functional limitation that indicates that the lead frame originates or is derived from a plurality of lead frames. As such, this is a process limitation. Moreover, the patentability of the product does not depend on its process of production, and the product of this product-by-process limitation is the same as the product of the applied prior art.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 2-6, 8-11, 15-19, 21-24, 28-32 and 34-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshigai as applied to 1, 7, 12-14, 20, 25-27, 33 and 38-39, and further in combination with applicant's admitted prior art.

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Although Yoshigai does not appear to explicitly teach the product of claims 2-6, 8-11, 15-19, 21-24, 28-32 and 34-37 at page 3, lines 18-21; and page 5, lines 11-20, applicant teaches that this product is well known. Furthermore, it would have been obvious to combine the well known product with the product of Yoshigai because it would facilitate connection of the die to the circuit substrate and the paddle.

Although the applied prior art does not appear to teach the process limitation that the ball and the bump are deposited by a wire bonding machine, the patentability of the product does not depend on its process of production, and the product of the product-by-process limitation is the same as the product of the applied prior art.

Applicant's remarks filed 9-25-00 have been fully considered but are deemed to be moot in view of the new grounds of rejection.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this

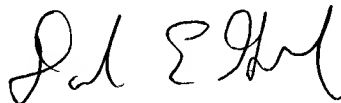
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action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any telephone inquiry of a general nature or relating to the status (MPEP 203.08) of this application or proceeding should be directed to the Customer Service Office, TC 2800, 703/306-3329.

Any telephone inquiry concerning this communication or earlier communications from the examiner should be directed to David E. Graybill at (703) 308-2947. Regular office hours: Monday through Friday, 8:30 a.m. to 6:00 p.m.

The fax phone number for group 2800 is 703/305-3431.



David E. Graybill
Primary Examiner
Art Unit 2814

D.G.